

WHAT IS CLAIMED IS:

1. A transport molecule, comprising: a dendrimer and a biologically active molecule bonded to the dendrimer through a disulfide linkage, an ether linkage, or a thioether linkage, wherein the dendrimer comprises at least one guanidine group, at least one protonated guanidine group, at least one protected guanidine group, at least one amidine group, at least one protonated amidine group, at least one protected amidine group, at least one ureido group, at least one protonated ureido group, at least one protected ureido group, at least one thioureido group, at least one protonated thioureido group, or at least one protected thioureido group.

2. A transport molecule, comprising: a dendrimer bonded to 6-mercaptopurine, wherein the dendrimer comprises at least one guanidine group, at least one protonated guanidine group, at least one protected guanidine group, at least one amidine group, at least one protonated amidine group, at least one protected amidine group, at least one ureido group, at least one protonated ureido group, at least one protected ureido group, at least one thioureido group, at least one protonated thioureido group, or at least one protected thioureido group.

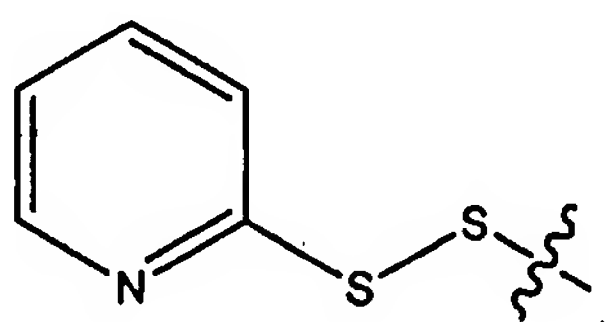
3. A transport molecule, comprising: a dendrimer and a biologically active molecule bonded to the dendrimer, wherein the biologically active molecule is a protein that has a size of about 40-100 kDalton, and the dendrimer comprises at least one guanidine group, at least one protonated guanidine group, at least one protected guanidine group, at least one amidine group, at least one protonated amidine group, at least one protected amidine group, at least one ureido group, at least one protonated ureido group, at least one protected ureido group, at least one thioureido group, at least one protonated thioureido group, or at least one protected thioureido.

4. The transport molecule of Claim 3, wherein the protein is a Green Fluorescent Protein.

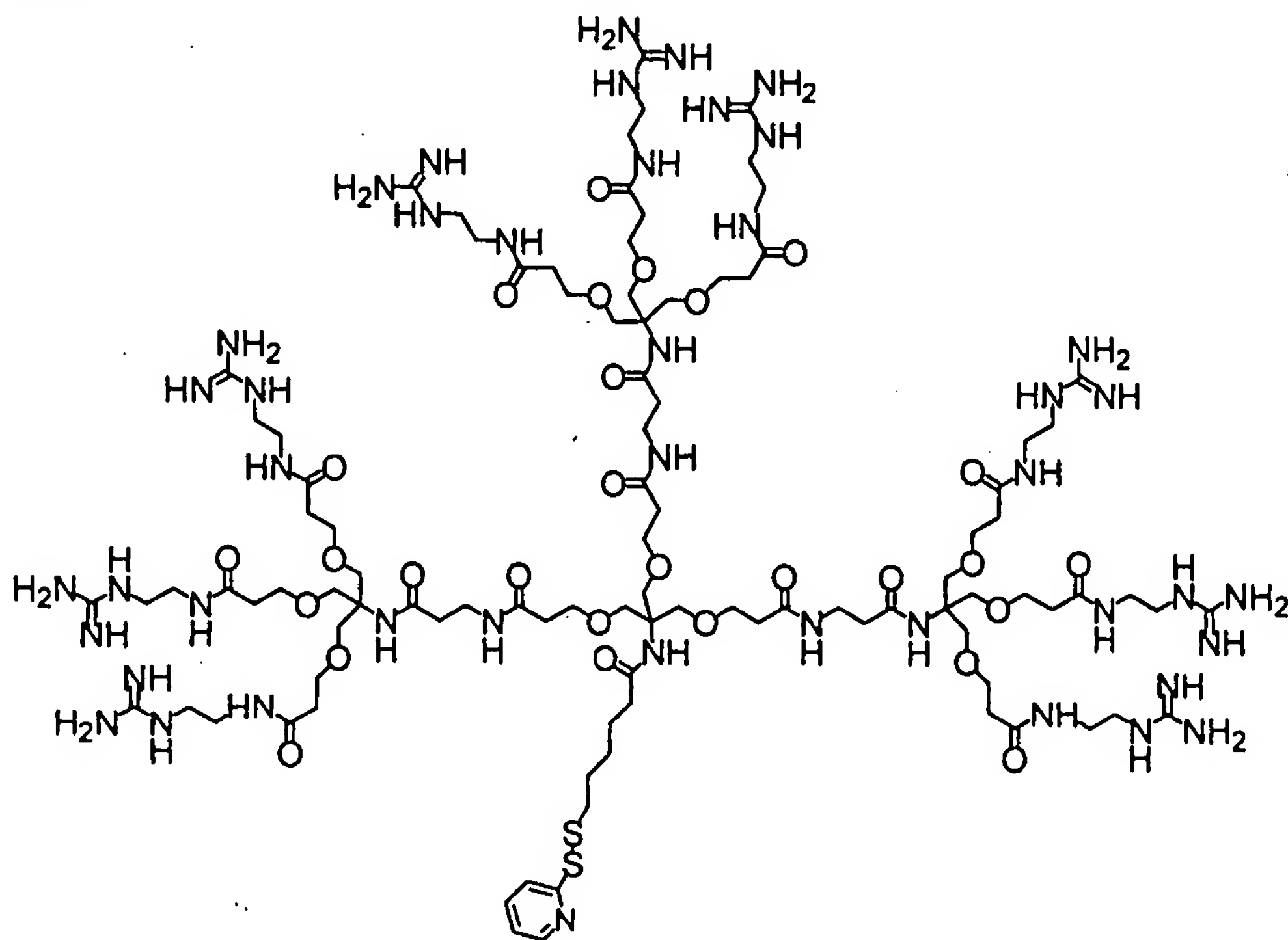
5. A method of increasing transport of a biologically active molecule across a biological membrane, comprising: contacting a biological membrane with the transport molecule of Claim 3, wherein the transport molecule comprising the biologically active molecule bonded to the dendrimer is transported across the biological membrane at a rate greater than the biologically active molecule is transported across the biological membrane when the biologically active molecule is not bonded to the dendrimer of the transport molecule.
6. The method of Claim 5, wherein the protein is a Green Fluorescent Protein.
7. A composition, comprising a dendrimer and Green Fluorescent Protein bonded to the dendrimer, wherein the dendrimer comprises at least two branch groups and two or more guanidine groups, protonated guanidine groups, or protected guanidine groups; two or more amidine groups, protonated amidine groups, or protected amidine groups; two or more ureido groups, protonated ureido groups, or protected ureido groups; two or more thioureido groups, protonated thioureido groups, or protected thioureido groups, wherein at least two of the two or more guanidine groups, protonated guanidine groups, or protected guanidine groups; amidine groups, protonated amidine groups, or protected amidine groups; ureido groups, protonated ureido groups, or protected ureido groups; or thioureido groups, protonated thioureido groups, or protected thioureido groups are borne at the end of the at least two branch groups of the dendrimer.
8. A method of measuring the uptake of a dendrimer in a cell, comprising administering the composition of Claim 7 to a human, an animal, or a plant.
9. A dendrimer, comprising a disulfide bond and at least two branch groups and two or more guanidine groups, protonated guanidine groups, or protected guanidine groups; two or more amidine groups, protonated amidine groups, or protected amidine groups; two or more ureido groups, protonated ureido groups, or protected ureido groups; two or more thioureido groups, protonated thioureido groups, or

protected forms thioureido groups, wherein at least two of the two or more guanidine groups, protonated guanidine groups, or protected guanidine groups; amidine groups, protonated amidine groups, or protected amidine groups; ureido groups, protonated ureido groups, or protected ureido groups; or thioureido groups, protonated thioureido groups, or protected thioureido groups are borne at the end of the at least two branch groups of the dendrimer.

10. The dendrimer of claim 9, wherein the dendrimer comprises a group of the following structure



11. The dendrimer of claim 10, wherein the dendrimer has the following structure



12. A method for attaching a dendrimer to a biological molecule, comprising:

reacting the disulfide bond of the dendrimer of any of Claims 9-11 with a biological molecule, wherein a bond is formed between the dendrimer and the biological molecule.